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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/056,973	01/25/2002	Tominari Araki	UNI051.001AUS	3883
38834	7590	12/29/2004	EXAMINER	
WESTERMAN, HATTORI, DANIELS & ADRIAN, LLP 1250 CONNECTICUT AVENUE, NW SUITE 700 WASHINGTON, DC 20036			DICUS, TAMRA	
			ART UNIT	PAPER NUMBER
			1774	
DATE MAILED: 12/29/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/056,973

Applicant(s)

ARAKI ET AL.

Examiner

Tamra L. Dicus

Art Unit

1774

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 October 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 10-51 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 10-51 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

The 112 rejection is withdrawn due to Applicant's amendment.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 10-29 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 10 recites the limitation "the optical material" and "said portion without the ink information". There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 10-11, 13-21, 25-30, and 32-51 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 6,063,174 to Shirota et al. in view of USPN 6654085 to Koike et al.

Shirota teaches an ink for use in ink jet recording in a multilayer optical element for liquid crystal displays. The ink forms colored ink (9) over glass or plastic plates (1) (optical member). Protective (10) covers ink (9). A non-colored portion (5) (without ink) is also shown. Ink (9) is equivalent to an arbitrarily formed component such as a character, figure, sign, or color

Art Unit: 1774

(instant claims 48-51). See Figures 1D, 1F (shows the multilayer formation) and 2 (shows the aforesaid multilayer structure in a liquid crystal display). See also col. 8, lines 57-60 teaching the need for glass or plastic to be transparent. See Figure 2 also. The ink composition is disclosed in col. 6, lines 1-15 where a transmittance of 95% or more is a property, which falls within Applicant's range of no less than 90% and up to 100% and not less than 92%, 94% and 96% of transmittance without ink (claims 25-27 and 44-46). Shirota does not refer to ink that is used for identification, however, this goes to intended use. It has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987). Additionally, ink is generally used to print information. Moreover, Shirota teaches the ink is for use in ink-jet recording, which would mean the ink is used for information. See col. 6, line 3. Because the ink is used for printing, it is equivalent to the same discontinuous layer as Applicant forming portions with and without ink.

To instant claims 28 and 47, that an optical member is different with or without ink on it is provided for by Shirota because Shirota has ink on portions and non-ink portions; which is a difference.

While Shirota teaches a protective member (10), Shirota does not teach an easy-releasing protective member or an optical transmittance of a portion without ink in the protective member is no less than 80% (instant claims 11, 30). Koike teaches a front scattering film with peelable substrate (3) and peelable protective films (34) and (54) from optical light scattering layer (2), retardation film (31) or optical polarizer film (51). See Figures 5-7, col. 6, lines 1-15, and Example 2. Because the peelable film is removed and cannot be peeled, it is considered easy-

Art Unit: 1774

releasing. Further the easy-releasing properties and optical transmittance of the portion without ink information would be expected because the same protective member materials are used (transparent plastic triacetyl cellulose, polycarbonate, polystyrene of Applicant's disclosure on page 7, lines 2-9) provided by Koike at col. 6, lines 1-15 of Koike. The peelable substrate 3 is also release treated (col. 6, lines 48-50), also providing an easy-releasing property. Koike teaches multilayer optical films described above are removable to laminate to liquid crystals to obtain a liquid crystal display. Koike teaches once at least one of the substrates have been peeled from the light scattering film, a retardation film is laminated thereon (col. 6, lines 55-65) to a transparent glass substrate having the liquid crystal layer formed thereon. See also Figure 5 and col. 9, lines 37-41 of Koike. Figure 5 shows the substrate 3 in contact with the liquid crystal 7 and optical materials (2, 31, 51) to form a liquid crystal display 8. The teaching of Koike is the same as Applicant intends because Applicant teaches at page 12, lines 4-8 the protective film is released so that the optical material is exposed to bond to another member such as a liquid crystal cell via adhesive which provides the same functionality as either peelable substrate (3) or peelable protective films (34) and (54). Thus, it would have been obvious to one of ordinary skill in the art to modify the multilayer optical element of Shirota to include an easy-releasing protective member because Koike teaches such a easy-releasing protective member is required for transfer purposes or ease of peeling for use in a liquid crystal display for as cited by Koike above (col. 6, lines 5-10, col. 7, lines 19-21, Figures 5-7, and Examples 1-2, of Koike) which is the same reason Applicant intends.

Shirota does not teach an optical member comprising a polarizing plate or retardation plate, (instant claims 13, 20-21, and 39-40) or separator adhered to an optical member via an

Art Unit: 1774

adhesive layer (instant claims 14-15 and 33-34). Koike teaches peelable substrates can also be retardation or polarizer films (col. 7, lines 19-21 and lines 43-45). Underlying polarizer (51) and retardation (31) are separators (33) and (53) with adhesives (32) and (52) lying therebetween. See Figures 5-7. It would have been obvious to one of ordinary skill in the art to modify the multilayer optical element of Shirota to further comprise:

- a polarizing or retardation plates to reflect light differently (col. 2, lines 15-35 of Koike).
- separator and adhesive for transfer purposes to objects such as liquid crystal displays or ease of peeling (col. 6, lines 5-10, col. 7, lines 19-21, and Examples 1-2, of Koike).

Shirota does not teach the adhesive and easy-releasing member thicknesses as per instant claims 16-19 and 35-38. However, Koike teaches the adhesive thickness is 10 microns in Example 2, falling within Applicants range of between 1 and 500 microns of instant claims 16 and 35. It would have been obvious to one of ordinary skill in the art to modify the element of Shirota to include a thickness of the adhesive layer between 1 and 500 microns because Koike teaches 10 microns is a conventional thickness (Example 2 of Koike). Shirota does not state the thickness of easy-releasing member (claims 17-19 and 36-38). However, it would have been obvious to one of ordinary skill in the art to produce a thickness as claimed, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272. Thickness effects the strength.

Art Unit: 1774

Claims 22-24, and 41-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 6,063,174 to Shirota et al. in view of USPN 6654085 to Koike et al. and further in view of USPN 4,812,034 to Mochizuki et al.

Shirota is relied upon above. Shirota does not teach a brightness-enhanced, linearly reflective polarizer, or chlosteric liquid crystal layer or plates of instant claims 22-24 and 41-43. Mochizuki teaches a projection type liquid crystal display device. Mochizuki uses a cholesteric-nematic phase transition type liquid crystal (equivalent to linearly reflective polarizer/chlosteric liquid crystal layer of instant claims 23-24 and 42-43) with positive dielectric anisotropy used in a projection type liquid crystal display device sealed between transparent substrates 13 and 14 and transparent electrodes 15 and 16 (col. 4, lines 9-20). See Figures 2a and 2b. Mochizuki provides the advantage of using this type of liquid crystal allows for a bright and high information contents display with a compact (equivalent to brightness-enhanced plate of instant claims 22 and 41), light, and low cost device and allows machinery input and thus simultaneous display at remote places, such as remote conference rooms or remote notice boards, in bright locations. The liquid crystal panel contains substrates. See Abstract, col. 2, lines 1-35, and col. 4, lines 37-40. It would have been obvious to one of ordinary skill in the art to modify the element of Shirota to include a linearly reflective polarizer and/or chlosteric liquid crystal layer because Mochizuki teaches including such material allows a bright and high information contents display with a compact, light, and low cost device and allows machinery input and thus simultaneous display at remote places, such as remote conference rooms or remote notice boards, in bright locations as cited above.

Art Unit: 1774

Claims 12 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 6,063,174 to Shirota et al. in view of USPN 6654085 to Koike et al. and further in view of USPN 5,856,048 to Tahara et al.

Shirota is relied upon above. Shirota does not teach an ink emits fluorescence. Tahara teaches information-recorded media and methods for reading the information comprising holograms and reflected layers. See Figure 1. A printed ink is formed of infrared fluorescent ink at col. 8, lines 54-55 and emits fluorescence at col. 9, lines 14-16. It would have been obvious to one of ordinary skill in the art to modify the element of Shirota to include fluorescent ink emitting fluorescence because Tahara teaches printed ink layers may add fluorescent pigments in order for the ink to emit fluorescence for easy discrimination from the rest of a recorded medium as taught by Tahara at col. 9, lines 12-55.

Response to Arguments

Applicant's arguments filed 10-08-04 have been fully considered but they are not persuasive. Applicant has amended the claims to now recite that the easy-releasing protective member contains the portion without ink information and not the optical material. Because of this amendment, a 112 2nd paragraph rejection is presented now to address multiple lack of antecedent basis issues as Applicant has made it clear that the portion without the ink information is not associated with the optical material (similar issues exist with instant claim 30 e.g. "the optical material"). Thus the 112 2nd paragraph rejections are presented now to address the phrases "the optical material" and "said portion without the ink information", because it is not clear if it is written in comparative form (e.g. with versus without), or if there is even a "portion without ink information" present. Shirota is still used in the rejection because Shirota

Art Unit: 1774

teaches the essential elements and structure for liquid crystal panels. Koike is still used in the rejection because Koike teaches various embodiments including optical materials in conjunction with peelable substrates for liquid crystal displays. Applicant argues that Koike cannot be combined with Shirota because Koike teaches the peelable protective films 34 and 54 being removed and not included in the final optical member of the instant invention and points only to Example 2. However, as previously set forth, other peelable substrates were also addressed, not just peelable protective films 34 and 54, and not just in Example 2, but also in Figures 6-7 (see page 3, 1st complete paragraph of prior Office Action e.g. “Koike teaches a front scattering film with peelable substrate and peelable protective films (34) and (54). The “easy-releasing” property addressed refer to both substrate and films.) Both substrates do not have to be peeled off and can remain above the optical films (light scattering, polarizing, or retardation films). Additionally, peelable substrates 3 are shown to not only be peeled, but do remain in the final optical member as Koike teaches at col. 6, lines 5-16, col. 7, lines 19-21, col. 9, lines 36-40, or can assist in ease of peeling from optical material via a surface release treatment (col. 6, lines 6-8). Applicant appears to just point to one option (peelable films 34 and 54) and has not considered the other options (peelable substrates). Applicant’s protective film is also released to expose the optical material to bond to a liquid crystal cell (page 12, lines 4-8 of Applicant’s specification), which is the same removal function Koike teaches attributed to layers 3, 34 or 54. Applicant teaches both options also in the specification at page 12, 1st complete paragraph, stating the protective film is released or *may* remain on the optical material. Applicant also argues that Shirota does not provide any motivation to provide the protective films of Koike in the form of color filters, since the protective films are removed and are never integrated into an

Art Unit: 1774

optical display, as a result of which there would have been no interest in providing unneeded color filter properties to the protective films of Koike. However, Applicant appears to not have considered the protective films of Koike can also remain on optical material as shown in Figure 5 and functions as a easy release or peeling layer contrary to Applicant's argument (col. 6, lines 5-10, col. 6, line 11-12, col. 7, lines 19-20 of Koike). Applicant appears to not have considered the instant easy-releasing protective film is also removed to adhere to liquid crystals as Applicant discloses on page 12, lines 4-8 of the instant specification. Applicant also appears to disregard the teaching of Shirota not only to color filters but to liquid crystal panels. Both Shirota and Koike teach the use of multilayered optics in liquid crystal displays/panels. Shirota already employs protective members, but does not attribute a "easy-releasing" property, however Koike does teach this property for several functions: assisting in easy release/peel and transfer purposes to liquid crystal displays shown throughout the Figures and prior art disclosure. Such combination results in Applicant's claimed invention as the easy-releasing protective member functions in Applicant's specification in the same way: removal and easy release. Applicant alleges there would have been no motivation to combination of Shirota and Koike would have provided an easy-release protective film without identification information, as taught in Koike. However, as previously set forth, Shirota teaches a non colored portion 5, which is equivalent to 'without identification information'. Also, as previously set forth, the ink is used for printing, which is equivalent to the same discontinuous layer as Applicant forming portions with and without ink.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

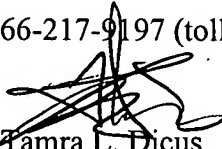
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tamra L. Dicus whose telephone number is 571-272-1519. The examiner can normally be reached on Monday-Friday, 7:00-4:30 p.m., alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on 571-272-3186. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.


Art Unit: 1774

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Tamra L. Dicus
Examiner
Art Unit 1774

12/17/04



RENA DYE
SUPERVISORY PATENT EXAMINER
A.U. 1774 12/23/04